

**REMARKS**

**I. Introduction**

In response to the Office Action dated October 30, 2006, Applicants have amended claims 11, 13, 16 and 20 to further clarify the subject matter of the present invention and to overcome the § 112 rejections. Claims 1-10, 12, 14, 17-18 and 21 were cancelled, without prejudice. The limitations of claim 17 were incorporated into claim 16 and the limitations of claim 21 were incorporated into claim 20. Claims 11 and 13 were rewritten in independent format. New claims 23-41 were added. Support for new claims 23-30 may be found, for example, in paragraphs [0126]-[0128] of the specification. Support for new claims 31-37 may be found, for example, in paragraphs [0040], [0044], and [0104]-[0106] of the specification. Support for new claims 38-41 may be found, for example, in paragraph [0050] of the specification. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

**II. The Rejection Of Claims 1-5 and 9-22 Under 35 U.S.C. § 103**

Claims 1-5 and 9-22 were rejected, under 35 U.S.C. § 103(a), as being unpatentable over Nishimura et al. (USP No. 6,403,288) in view of Grabowski (USP No. 5,210,548). Applicants respectfully traverse these rejections for at least the following reasons.

With regard to the present invention, amended claims 11 and 13 recite, in-part, a pattern formation method comprising the steps of: forming a resist film of a positive chemically amplified resist material; and forming a resist pattern by developing said resist film with a developer after irradiating, through a mask, said resist film with exposing light having a light

component entering said resist film at the Brewster's angle, wherein said chemically amplified resist material includes a base polymer for generating sulfonic acid through irradiation with light. In addition, claims 13 and 16 recite wherein said chemically amplified resist material includes a dissolution inhibitor for generating sulfonic acid through irradiation with light.

In contrast to the present invention, Nishimura et al. (USP 6,403,288) and Grabowski (USP 5,210,548) do not disclose either a base polymer generating sulfonic acid through irradiation with light or a dissolution inhibitor generating sulfonic acid through irradiation with light, as a chemically amplified resist material. Accordingly, the limitations of claims 11, 13 and 16 are not disclosed in Nishimura and Grabowski.

Turning to claim 20, amended claim 20 recites a pattern formation method comprising the steps of: forming a resist film of a positive chemically amplified resist material; and forming a resist pattern by developing said resist film with a developer after irradiating, through a mask, said resist film with exposing light having a light component entering said resist film at the Brewster's angle, wherein said chemically amplified resist material includes an acid, and wherein said acid is formic acid.

However, Nishimura and Grabowski do not disclose a chemically amplified resist material including formic acid. As such, Nishimura and Grabowski fail to teach or suggest amended claim 20 of the present invention.

In order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA1974). At a minimum, as Nishimura and Grabowski both fail to teach or suggest a pattern formation method wherein either a base polymer generating sulfonic acid through

irradiation with light or a dissolution inhibitor generating sulfonic acid through irradiation with light, as a chemically amplified resist material, OR a chemically amplified resist material including formic acid, it is submitted that Nishimura and Grabowski, alone or in combination, do not render claims 11, 13, 16 and 20 obvious. Accordingly, it is respectfully requested that the § 103 rejection of claims 11, 13, 16 and 20 be withdrawn.

Furthermore, as Nishimura and Grabowski do not disclose or suggest either a structure of using an ester of acrylic acid, methacrylic acid or  $\alpha$ -trifluoromethyl acrylic acid, as a dissolution inhibitor included in a chemically amplified resist material and generating carboxylic acid through irradiation with light, or a structure of using an ester of polyacrylic acid, polymethacrylic acid or poly( $\alpha$ -trifluoromethylacrylic acid), as a base polymer included in a chemically amplified resist material and generating carboxylic acid through irradiation with light, Applicants submit that the inventions in claims 31-33 are not obvious from these references.

**III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 11, 13, 16 and 20 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**IV. Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

**Application No.: 10/735,688**

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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